CONTENTS OF VOLUME 21

Number 1

Obituary 1

Review
W. B. Mann 3 The International Chernobyl Project Technical Report: assessment of radiological consequences and evaluation of protective measures

C. R. Divgi, A. M. Scott, K. McDermott, P. S. Fallone, S. Hilton, K. Siler, N. Carmichael, F. Daghighian, R. D. Finn, A. M. Cohen, J. Schlom and **S. M. Larson** 9 Clinical comparison of radiolocalization of two monoclonal antibodies (mAbs) against the TAG-72 antigen

J. G. Tibben, L. F. A. G. Massuger, O. C. Boerman, R. A. M. J. Claessens, G. F. Borm, K. Y. Pak, E. B. Koenders and **F. H. M. Corstens** 17 Decreased kidney uptake of technetium-99m-labelled Fab′ fragments in ovarian carcinoma bearing nude mice using a cleavable chelator

Kathryn E. Bergmann, Scott W. Landvatter, Pamela G. Rocque, Kathryn E. Carlson, Michael J. Welch and **John A. Katzenellenbogen** 25 Oxohexestrol derivatives labeled with fluorine-18. Synthesis, receptor binding and *in vivo* distribution of two non-steroidal estrogens as potential breast tumor imaging agents

Aren Van Waarde, Gerben M. Visser, Ton J. Visser, Jaap Bouwer, Anne M. J. Paans and **Willem Vaalburg** 41 Rodent biodistribution and metabolism of tritiated 4-DAMP, a M_3 subtype-selective cholinoceptor ligand

Christian Loc'h, Karine Mardon, Heric Valette, Catherine Brutesco, Pascal Merlet, Andre Syrota and **Bernard Maziere** 49 Preparation and pharmacological characterization of [^{76}Br]-*meta*-bromobenzylguanidine ([^{76}Br]MBBG)

Hideo Saji, Yasuhiko Iida, Iwao Nakatsuka, Masaki Kataoka, Takenori Miyao, Kazuhiko Ariyoshi, Yasuhiro Magata, Akira Yoshitake and **Akira Yokoyama** 57 Radioiodinated nordiazepam analog for *in vivo* assessment of benzodiazepine receptors by single photon emission tomography

Yasushi Arano, Hiroshi Matsushima, Masaaki Tagawa, Tatsuo Inoue, Mitsuru Koizumi, Makoto Hosono, Harumi Sakahara, Keigo Endo, Junji Konishi and **Akira Yokoyama** 63 A newly designed radioimmunoconjugate releasing a hippurate-like radiometal chelate for enhanced target/non-target radioactivity

Atsushi Takeda, Tetsu Sato and **Shoji Okada** 71 Tumor detection by radioimaging of hepatic radiozinc—correlation with metallothionein content

Gene-Jack Wang, Nora D. Volkow, Alfred P. Wolf, Stefan Madajewicz, Joanna S. Fowler, David J. Schlyer and **Robert R. MacGregor** 77 Positron emission tomography study of human prostatic adenocarcinoma using carbon-11 putrescine

Carla J. Mathias, Mark A. Green, Wallace B. Morrison and **Deborah W. Knapp** 83 Evaluation of Cu–PTSM as a tracer of tumor perfusion: comparison with labeled microspheres in spontaneous canine neoplasms

Colin Tilcock, Quet Fah Ahkong and **Derek Fisher** 89 ^{99m}Tc-labeling of lipid vesicles containing the lipophilic chelator PE–DTTA: effect of tin-to-chelate ratio, chelate content and surface polymer on labeling efficiency and biodistribution behavior

Pradeep K. Garg, Sudha Garg and **Michael R. Zalutsky** 97 Synthesis and preliminary evaluation of *para*- and *meta*-[^{18}F]fluorobenzylguanidine

Ganesan Vaidyanathan, Donna Affleck and **Michael R. Zalutsky** 105 Monoclonal antibody F(ab′)$_2$ fragment labeled with *N*-succinimidyl 2,4-dimethoxy-3-halobenzoates: *in vivo* comparison of iodinated and astatinated fragments

Alan J. Fischman, Howard F. Solomon, John W. Babich, Michael J. Abrams, Ronald J. Callahan, H. William Strauss and **Robert H. Rubin** 111 Imaging of focal sites of inflammation in Rhesus monkeys with ^{99m}Tc-labeled human polyclonal IgG

Gerald S. Jones Jr, David R. Elmaleh, H. W. Strauss and **A. J. Fischman** — 117 Synthesis and biodistribution of a new ^{99m}technetium fatty acid

Technical Note
Malcolm V. Pimm and **Sandra J. Gribben** — 125 Influence of a syngeneic anti-idiotypic antibody response to a mouse anti-tumour monoclonal antibody on biodistribution of its radiolabelled Fc-intact monovalent Fab/c fragment

Book Review
David M. Taylor — 129

Number 2

Simona Ben-Haim, Daniel Kahn, George J. Weiner, Mark T. Madsen, Alan D. Waxman, Cynthia M. Williams, Daniel L. Clarke-Pearson, R. Edward Coleman and **Robert T. Maguire** — 131 The safety and pharmacokinetics in adult subjects of an intravenously administered ^{99m}Tc-labeled 17 amino acid peptide (CYT-379)

Meral T. Ercan and **Erkan Ünlenen** — 143 Accumulation of some small molecular weight complexes of ^{99m}Tc in experimental abscesses

Jean N. DaSilva, James E. Carey, Philip S. Sherman, Teresa J. Pisani and **Michael R. Kilbourn** — 151 Characterization of [^{11}C]tetrabenazine as an *in vivo* radioligand for the vesicular monoamine transporter

Susan Z. Lever, Kwamena E. Baidoo, Ashfaq Mahmood, Kaname Matsumura, Ursula Scheffel and **Henry N. Wagner Jr** — 157 Novel technetium ligands with affinity for the muscarinic cholinergic receptor

Colin Tilcock, Mel Yap, Margaret Szucs and **Deepank Utkhede** — 165 PEG-coated lipid vesicles with encapsulated technetium-99m as blood pool agents for nuclear medicine

Howard S. Rosenzweig, Girish N. Ranadive, Troy Seskey, Michael W. Epperly and **William D. Bloomer** — 171 A novel method for the non-chromatographic purification of technetium-99m-labeled monoclonal antibodies: a study with B72.3 monoclonal antibody

Mohammed S. Al-Tikriti, Ronald M. Baldwin, Yolanda Zea-Ponce, Elzbieta Sybirska, Sami S. Zoghbi, Marc Laruelle, Robert T. Malison, Hank F. Kung, Robert M. Kessler, Dennis S. Charney, Paul B. Hoffer and **Robert B. Innis** — 179 Comparison of three high affinity SPECT radiotracers for the dopamine D_2 receptor

Timothy R. DeGrado, G. Keith Mulholland, Donald M. Wieland and **Markus Schwaiger** — 189 Evaluation of (−)[^{18}F]fluoroethoxybenzovesamicol as a new PET tracer of cholinergic neurons of the heart

Renato B. del Rosario, Yong-woon Jung, Kwamena E. Baidoo, Susan Z. Lever and **Donald M. Wieland** — 197 Synthesis and *in vivo* evaluation of a $^{99m/99}$Tc–DADT–benzovesamicol: a potential marker for cholinergic neurons

Paul O. Zamora, Mark D. Domalewski, Michael J. Marek, Pia Budd and **Buck A. Rhodes** — 205 Quantitation of radiolabeled antibody binding to cells by thin-layer chromatography

Philip H. Elsinga, Aren van Waarde, Gerben M. Visser and **Willem Vaalburg** — 211 Synthesis and preliminary evaluation of (*R,S*)-1-[2-((carbamoyl-4-hydroxy)phenoxy)ethylamino]-3-[4-(1-[^{11}C]-methyl-4-trifluoromethyl-2-imidazolyl)phenoxy]-2-propanol ([^{11}C]CGP 20712A) as a selective β_1-adrenoceptor ligand for PET

Gary A. Rogers, Sharon Stone-Elander, Martin Ingvar, Lars Eriksson, Stanley M. Parsons and **Lennart Widén** — 219 ^{18}F-labelled vesamicol derivatives: syntheses and preliminary *in vivo* small animal positron emission tomography evaluation

J.-A. M. Tafani, B. Francés, Y. Coulais, A. Méjean-Galzi, M. Goeldner, C. Hirth, R. Guiraud and **J.-M. Zajac** — 231 *In vivo* binding of [^{125}I]NH_2-carfentanil to μ opioid receptors in mouse brain

Kazuo Kubota, Kiichi Ishiwata, Roko Kubota and **Susumu Yamada** — 239 Investigation of tumor invasion with [^{111}In]antimyosin

Gene-Jack Wang, Prantika Som, Zvi H. Oster, Nora D. Volkow, Furn F. Knapp Jr and **Donald F. Sacker** 245 Quantitative autoradiographic measurement of cocaine-induced regional myocardial metabolic changes in hypertensive rats

Vibhudutta Awasthi, S. Gambhir and **A. B. Sewatkar** 251 ^{99m}Tc–insulin: labeling, biodistribution and scintiimaging in animals

Robert Cantineau, Marcel Guillaume, Philippe Damhaut, Christian Lemaire, Alain Plenevaux, Françoise Gauthier, Bernard Pourrias and **Léon Christiaens** 255 Synthesis and biodistribution of [5-^{131}I]iodotropapride: a potential D_2 dopamine receptor imaging agent

Y. Coulais, G. Cros, M. H. Darbieu, J. A. M. Tafani, H. Belhadj-Tahar, E. Bellande, R. Pasqualini and **R. Guiraud** 263 Synthesis, characterization and biodistribution of new ^{99m}Tc oxo and nitrido complexes with bi- and tetradendate unsaturated NS and N_2S_2 Schiff bases derived from 2-aminocyclopentene-1-dithiocarboxylic acid as potential heart imaging agents

Terushi Haradahira, Minoru Maeda, Ayako Kato, Yoko Kanazawa, Mayumi Yamada, Yoshikuni Torii, Yu-ichi Ichiya and **Koji Masuda** 269 Metabolic pathway of 2-deoxy-2-[^{18}F]fluoro-D-talose in mice: trapping in tissue after phosphorylation by galactokinase

Technical Notes

A. K. Singh, Pushpa Mishra, Ravi Kashyap and **U. P. S. Chauhan** 277 A simplified kit for instant preparation of technetium-99m human immunoglobulin-G for imaging inflammatory foci

DeAnna K. Coggin, Carla J. Mathias and **Mark A. Green** 283 Investigation of [^{67}Ga]dimethylgallium(III) acetylacetonate as a potential radiopharmaceutical

Number 3

EURO-IMMUNOANALYSE '93

Preface vii

STATE OF THE ART LECTURE

Pierre Corvol 287 Information et communication cellulaires: les récepteurs couplés aux protéines G

LECTURES

M. Gourmelen, L. Perin and **Y. Le Bouc** 297 IGFs and their binding proteins

Henri Pujol 303 Intérêt d'une détection précoce des métastases? Impact sur la survie et la qualité de vie

SESSION 1: HETEROGENEITY OF CIRCULATING HORMONES

Anne-Marie Nagy, Sylvain Meuris and **Claude Robyn** 317 Origin and significance of the heterogeneity of protein hormones

Bruno Claustrat, Jocelyne Brun, Jacques Champier, Catherine Harthe and **Marie-Odile Joly** 331 Heterogeneity of human prolactin. Influence on immunoassays (RIA and IRMA)

R. Rizzoli, L. Vadas and **J-Ph. Bonjour** 337 Determination of circulating parathyroid hormone levels and differential diagnosis of hypercalcemia

M. Roger and **N. Lalhou** 349 Heterogeneity of plasma gonadotropins. Consequences on immunological properties of LH

J. M. Guliana, J. Taboulet, C. Calmettes, G. Milhaud, M. S. Moukhtar and **A. Jullienne** 359 Heterogeneity of circulating calcitonin levels: relations with calcitonin biosynthesis in medullary thyroid carcinomas

SESSION 2: GROWTH HORMONE

Gerhard Baumann, Melissa Shaw, Klauss Amburn, Tauhid Jan, Norma Davila, Moises Mercado, Mark Stolar and **John MacCart**	369	Heterogeneity of circulating growth hormone
Jürg Girard	381	Apparent growth hormone levels in plasma and urine. Methodological "artefacts"
G. Sassolas, R. Cohen and **J. J. Tsati**	393	Stratégie d'exploration des états d'hypersécrétion d'hormone de croissance
Jean-Claude Job and **Pierre Chatelain**	401	Present and potential uses of growth hormone in therapeutics

SESSION 3: BIOLOGICAL DIAGNOSIS OF BLOOD TRANSMITTED VIRAL INFECTION

Paul V. Holland	407	Overview: Diagnostic tests for viral infections transmitted by blood
C. Trepo, C. Alonso, J. S. Li, D. Qu, F. Laurent and **L. Vitvitski**	419	Limites du diagnostic immunosérologique et moléculaire de l'hépatite C
J. M. Lemaire, S. Voisin and **J. Coste**	433	Serological diagnosis of HTLV-I/II infections in France
Elisabetta Cariani, Antonella Ravaggi, Antonella Zonaro, Alberto Albertini and **Daniele Primi**	441	Diagnosis of viral hepatitis with a nonisotopic hybridization assay

SESSION 4: THE BIOLOGY OF CANCER

Richard J. Auchus and **Suzanne A. W. Fuqua**	449	Prognostic factors and variant estrogen receptor RNAs in clinical breast cancer
P. Teillac	455	Que peut attendre aujourd'hui le clinicien du dosage du PSA?
J. Grenier, J. L. Pujol, F. Guilleux, J. P. Daures, H. Pujol and **F. B. Michel**	471	Cyfra 21-1, a new marker of lung cancer
C. Bohuon, J. M. Bidart, P. Ghillani-Dalbin, F. Troalen and **D. Bellet**	477	Problèmes analytiques dans le dosage de marqueures tumoraux
Richard Cohen, Gian-Carlo Zucchelli, Marc Fraysse, Alessandro Pilo, Marie-Yolande Rigault, Serge Grillet and **Charles-Albert Bizollon**	483	'Oncocheck': an international external quality assessment scheme for immunoassays of tumor markers

SESSION 5: CURRENT EVENTS IN IMMUNOANALYSIS

Roger Ekins	495	Immunoassay: recent developments and future directions
P. Franchimont, A. Hazout, Y. Menezo and **J. Colette**	523	Insulin-like Growth Factors I et II dans la maturation folliculaire et ovocytaire
Luigi Bartalena, Paolo Vitti and **Aldo Pinchera**	531	Diagnosis of thyroid dysfunction: present and future
Jacques Pirenne, France Pirenne-Noizat, Donat de Groote, Yvonne Vrindts, Miguel Lopez, Renée Gathy, Nicolas Jacquet, Michel Meurisse, Pierre Honore and **Paul Franchimont**	545	Cytokines and organ transplantation. A review
Gianfranco Giraudi and **Claudio Baggiani**	557	Immunochemical methods for environmental monitoring

Number 4

Farah Shah, Susan P. Hume, Victor W. Pike, Sharon Ashworth and **Joe McDermott** — 573 Synthesis of the enantiomers of [*N*-methyl-^{11}C]PK 11195 and comparison of their behaviours as radioligands for PK binding sites in rats

Eva Barbarics, James F. Kronauge, Catherine E. Costello, Gy. A. Jànoki, B. Leonard Holman, Alan Davison and **Alun G. Jones** — 583 *In vivo* metabolism of the technetium isonitrile complex [Tc(2-ethoxy-2-methyl-1-isocyanopropane)$_6$]$^+$

Raymond E. Gibson, Holly T. Beauchamp, Christine Fioravanti, Nancy Brenner and **H. Donald Burns** — 593 Receptor binding radiotracers for the angiotensin II receptor: radioiodinated [Sar^1, Ile^8]angiotensin II

D. Scott Wilbur, Donald K. Hamlin, John C. Livesey, Rajiv R. Srivastava, George E. Laramore and **Thomas W. Griffin** — 601 Synthesis and radioiodination of a *nido*-1,2-carboranyl derivative of 2-nitroimidazole

Kouichi Wada, Yasuhisa Fujibayashi, Hideyuki Taniuchi, Naoyuki Tajima, Nagara Tamaki, Junji Konishi and **Akira Yokoyama** — 613 Effects of ischemia-reperfusion injury on myocardial single pass extraction and retention of Cu–PTSM in perfused rat hearts: comparison with ^{201}Tl and ^{14}C-iodoantipyrine

Sally W. Schwarz, Judith M. Connett, Carolyn J. Anderson, Pamela A. Rocque, Gordon W. Philpott, Li Wu Guo and **Michael J. Welch** — 619 Evaluation of a direct method for technetium labeling intact and F(ab′)$_2$ 1A3, an anticolorectal monoclonal antibody

Christer Halldin, Thomas Högberg and **Lars Farde** — 627 Fluorine-18-labelled NCQ 115, a selective dopamine D-2 receptor ligand. Preparation and positron emission tomography

Jean Meng, David R. Elmaleh, Shireen Jyawook, Stephen Weiss, Nathaniel M. Alpert, John W. Babich, Ronald G. Tompkins and **Alan J. Fischman** — 633 Synthesis of 2-[^{18}F]fluoro-2-deoxy-L-glucose and positron emission tomography studies in monkeys

Ravi S. Harapanhalli, Roger W. Howell and **Dandamudi V. Rao** — 641 bis-Benzimidazole dyes, Hoechst 33258 and Hoechst 33342: radioiodination, facile purification and subcellular distribution

Gary L. Griffiths, David M. Goldenberg, Anastasia L. Jones and **Hans J. Hansen** — 649 Preparation of a pure ^{99m}Tc–F(ab′)$_2$ radioimmunoconjugate by direct labeling methods

N. C. Goomer, P. V. Kulkarni, A. Constantinescu, P. Antich, R. W. Parkey and **J. R. Corbett** — 657 Synthesis and evaluation of a new class of technetium-99m monocationic radiotracers from dithienyldiazalkanes

O. T. DeJesus, D. Murali, R. Kitchen, C. Endres, T. R. Oakes, S. E. Shelton, L. Freund, D. Houser, H. Uno, J. E. Holden and **R. J. Nickles** — 663 Evaluation of 3-[^{18}F]fluoro-α-fluoromethyl-*p*-tyrosine as a tracer for striatal tyrosine hydroxylase activity

E. Livni, Winston Satterlee, Roger L. Robey, Charles A. Alt, Elden E. Van Meter, John W. Babich, William J. Wheeler, Douglas D. O'Bannon, James H. Thrall and **Alan J. Fischman** — 669 Synthesis of [^{11}C]dapoxetine · HCl, a serotonin re-uptake inhibitor: biodistribution in rat and preliminary PET imaging in the monkey

Technical Note

Samuel M. Mazza and **Terry Yoshizumi** — 677 ^{48}V radionuclidic impurity in product streams from liquid cyclotron targets with titanium windows

Announcement — I

Number 5

DIAGNOSTIC IMAGING IN ONCOLOGY

W. C. Eckelman, G. Di Chiro, M. Salvatore and **S. M. Larson** — 681 Introduction

STRUCTURAL IMAGING

Charles L. Dumoulin — 683 Magnetic resonance angiography: today and tomorrow

Willi A. Kalender — 693 Principles and applications of spiral CT

Giovanni Simonetti, Antonio Orlacchio, Ezio Fanucci and **Raimondo Chiusano** — 701 Advances in interventional radiology in oncology

Vincenzo Cavallo and **Francesco Giovagnorio** — 709 HRCT studies of lung anatomy

Giuseppe Belfiore, Sabato di Filippo, Cesare Guida, Ines Marano and **Ernesto Porta** — 713 CT-guided biopsy of lung lesions

FUNCTIONAL IMAGING

Steven M. Larson, Chaitanya Divgi, Andrew Scott, Farhad Daghighian, Homer Macapinlac and **Sydney Welt** — 721 Current status of radioimmunodetection

Homer A. Macapinlac, Andrew M. Scott, Steven M. Larson, Chaitanya R. Divgi, Samuel D. J. Yeh and **Stanley J. Goldsmith** — 731 Gallium-67–citrate imaging in nuclear oncology

Randall A. Hawkins and **Carl K. Hoh** — 739 PET FDG studies in oncology

Michael V. Knopp, H. Bischoff, W. J. Lorenz and **G. Van Kaick** — 749 PET imaging of lung tumours and mediastinal lymphoma

William C. Eckelman — 759 The application of receptor theory to receptor-binding and enzyme-binding oncologic radiopharmaceuticals

Silvana Del Vecchio, M. Patrizia Stoppelli, Maria V. Carriero, Rosa Fonti, Ornella Massa, Pei Yong Li, Gerardo Botti, Maria Cerra, Giuseppe D'Aiuto, Giuseppe Esposito and **Marco Salvatore** — 771 *In vitro* receptor imaging for characterization of human solid tumors

A. M. Scott, H. Macapinlac, J. J. Zhang, H. Kalaigian, M. C. Graham, C. R. Divgi, G. Sgouros, S. J. Goldsmith and **S. M. Larson** — 775 Clinical applications of fusion imaging in oncology

Steven M. Larson, Chaitanya R. Divgi, Andrew Scott, George Sgouros, Martin C. Graham, Lale Kostakoglu, David Scheinberg, Nai-Kong V. Cheung, Jeffrey Schlom and **Ronald D. Finn** — 785 Current status of radioimmunotherapy

Number 6

Michinao Mizugaki, Takanori Hishinuma, Katsuhiko Kimura, Hitoshi Nakamura, Hisashi Aso, Fumio Ishii, Masazumi Nishikawa, Kunihiko Itoh, Yoshihisa Tomioka, Shunji Ishiwata, Hiroshi Moritani, Taizo Uyama and **Tatsuo Ido** — 793 The distribution of [^{11}C]cocaine in normal and cocaine-sensitization mice

Toshiaki Irie, Kiyoshi Fukushi, Yoshio Akimoto, Hiroshi Tamagami and **Tadashi Nozaki** — 801 Design and evaluation of radioactive acetylcholine analogs for mapping brain acetylcholinesterase (AchE) *in vivo*

Fumi Nagatsugi, Shigeki Sasaki and **Minoru Maeda** — 809 8-[^{18}F]Fluorooctanoic acid and its β-substituted derivatives as potential agents for cerebral fatty acid studies: synthesis and biodistribution

Stefan Guhlke, Hans-Jürgen Wester, Christian Bruns and **Gerhard Stöcklin** — 819 (2-[^{18}F]fluoropropionyl-(D)phe^{1})-octreotide, a potential radiopharmaceutical for quantitative somatostatin receptor imaging with PET: synthesis, radiolabeling, *in vitro* validation and biodistribution in mice

Uwe Haberkorn, Sibylle I. Ziegler, Franz Oberdorfer, Herbert Trojan, Dietrich Haag, Peter Peschke, Martin R. Berger, Annette Altmann and **Gerhard van Kaick** — 827 FDG uptake, tumor proliferation and expression of glycolysis associated genes in animal tumor models

Uwe Haberkorn, Franz Oberdorfer, Thomas Klenner, Ludwig G. Strauss, Michael Stöhr, Reinhard Wallich, Annette Altmann and **Gerhard van Kaick** — 835 Metabolic and transcriptional changes in osteosarcoma cells treated with chemotherapeutic drugs

Stephen M. Moerlein, Joel S. Perlmutter, Michael J. Welch and **Marcus E. Raichle** — 847 First-pass extraction fraction of iodine-123 labeled perfusion tracers in living primate brain

Allen R. Braun, Richard E. Carson, H. Richard Adams, Ronald D. Finn, Barbara E. Francis and **Peter Herscovitch** — 857 A kinetic comparison of [^{18}F]2-fluoro-2-deoxyglucose and [^{18}F]2-fluoro-2-deoxymannose using positron emission tomography

Moustapha Hassan, Essam Refai, Mats Andersson, Per-Olof Schnell and **Hans Jacobsson** — 865 *In vivo* dynamical distribution of ^{131}I-VIP in the rat studied by gamma-camera

Zhenping Zhu, Tarunendu Ghose, Yaroslav Kralovec and **Chunzheng Yang** — 873 Immunoreactivity, stability, pharmacokinetics and biodistribution of a monoclonal antibody to human leukemic B cells after three different methods of radioiodination

A. Ciarmiello, L. Pace, S. Betocchi, B. Alfano, M. Chiariello and **M. Salvatore** — 883 Assessment of left ventricular regional function by radionuclide angiography: effects of number of sectors on repeatability

Technical Notes

Malcolm V. Pimm and **Sandra J. Gribben** — 889 Effect of systemic DTPA treatment on tissue retention of free and carrier-bound ^{111}In from labelled proteins and polymer

Miklós Papós, Jenő Láng, Mária Rajtár and **László Csernay** — 893 Leukocyte labeling with ^{99m}Tc–HMPAO. The role of the *in vitro* stability of HMPAO on the labeling efficacy and image quality

David A. Goodwin, Charles McK. Ransone, Carol I. Diamanti and **Maureen McTigue** — 897 Rapid synthesis and quality control of ^{68}Ga-labeled chelates for clinical use

Letter to the Editors

Kouichi Wada, Yasuhisa Fujibayashi, Naoyuki Tajima and **Akira Yokoyama** — 901 A new radioiodinated agent for detecting radicals *in vivo*: synthesis and preliminary evaluation

Number 7

M. B. Awang, J. G. Hardy, S. S. Davis, M. V. Pimm, S. J. Parry and **I. R. Wilding** — 905 Evaluation of ^{153}Sm-diethylenetriaminepentaacetic acid for radiolabelling of pharmaceutical dosage forms by neutron activation

Rodney L. Page, Pradeep K. Garg, Ganesan Vaidyanathan and **Michael R. Zalutsky** — 911 Preclinical evaluation and PET imaging of ^{18}F-labeled Me1-14 $F(ab')_2$ fragment in normal dogs

D. Bender, M. Holschbach and **G. Stöcklin** — 921 Synthesis of n.c.a. carbon-11 labelled clozapine and its major metabolite clozapine-*N*-oxide and comparison of their biodistribution in mice

Per Hartvig, Johann Valtysson, Gunnar Antoni, Göran Westerberg, Bengt Långström, Enrica Ratti Moberg and **Ivar Øye** — 927 Brain kinetics of (*R*)- and (*S*)-[*N*-methyl-^{11}C]ketamine in the Rhesus monkey studied by positron emission tomography (PET)

Jae Min Jeong, Seigo Kinuya, Chang H. Paik, Tsuneo Saga, Virendar K. Sood, Jorge A. Carrasquillo, Ronald D. Neumann and **James C. Reynolds** — 935 Application of high affinity binding concept to radiolabel avidin with Tc-99m labeled biotin and the effect of pI on biodistribution

A. Verhagen, M. Studeny, G. Luurtsema, G. M. Visser, C. C. J. De Goeij, M. Sluyser, O. E. Nieweg, E. Van Der Ploeg, K. G. Go and **W. Vaalburg** — 941 Metabolism of a [^{18}F]fluorine labeled progestin (21-[^{18}F]fluoro-16α-ethyl-19-norprogesterone) in humans: a clue for future investigations

Mitsuhiko Akaboshi, Kenichi Kawai, Yoshiko Tanaka, Teruie Sumino, Shinichiro Masunaga, Koji Ono and **Tokiharu Miyahara** 953 Determination of the target volume of HeLa cells treated with platinum-195 m radiolabeled *cis*-diammine(1,1-cyclobutanedicarboxylato)platinum(II); comparison with *cis*- and *trans*-diammine-dichloroplatinums(II)

Hiroyuki Nakamichi, Matsutaro Murakami, Shuichi Miura, Yasushi Kondoh, Shigenori Mizusawa and **Yukihiko Ono** 959 Does the anabolic metabolism of L-[2-^{18}F]fluorophenylalanine and L-[2,6-^{3}H]phenylalanine differ in the cerebrum and the cerebellum?

P. Bassa, J. R. García Garzón, C. Piera, A. Pavía, M. Minoves, M. Moragas, J. Pavía, F. Lomeña and **J. Setoain** 963 Procedure for red blood cell labelling with ^{99m}Tc-HMPAO. Methodology and quality control

Ronald M. Baldwin, Yolanda Zea-Ponce, Sami S. Zoghbi, Mohammed S. Al-Tikriti, John P. Seibyl, Elzbieta H. Sybirska, Robert T. Malison, Marc Laruelle, Dennis S. Charney, Paul B. Hoffer and **Robert B. Innis** 969 Pharmacokinetics of the three radioiodinated dopamine D_2 receptor ligands [^{123}I]IBF, [^{123}I]epidepride and [^{123}I]2′-ISP in nonhuman primates

R. E. Shefer, B. J. Hughey, R. E. Klinkowstein, M. J. Welch and **C. S. Dence** 977 A windowless ^{13}N production target for use with low energy deuteron accelerators

C. S. Dence, M. J. Welch, B. J. Hughey, R. E. Shefer and **R. E. Klinkowstein** 987 Production of [^{13}N]ammonia applicable to low energy accelerators

M. R. A. Pillai, E. O. Schlemper and **W. A. Volkert** 997 Some observations on the instability of ^{99m}Tc-complexes of propylene amine oxime (PnAO)

L. W. Herman, A. J. Fischman, R. G. Tompkins, R. N. Hanson, C. Byon, H. W. Strauss and **D. R. Elmaleh** 1005 The use of pentafluorophenyl derivatives for the ^{18}F labelling of proteins

Technical Notes

Joseph C. Hung and **Thomas J. Herold** 1011 Modified radioiodination and quality control methods for [^{125}I]sodium iothalamate

Guillermina Ferro-Flores and **Judith Lezama-Carrasco** 1013 A freeze dried kit formulation for the preparation of ^{99m}Tc–EHDP–MoAb–IOR CEA1 complex

Number 8

Jakobína Grétarsdóttir, Eva Forssell Aronsson, Lars Jacobsson, Ólöf Hafsteinsdóttir, Stig Holmberg, Larsolof Hafström, Sture Lindegren, Börje Karlsson, Leif Lindholm and **Sören Mattsson** 1017 ^{125}I-labelling of an internally ^{75}Se-labelled monoclonal antibody—biodistribution in tumour-bearing nude mice

F. Nicholas Franano, W. Barry Edwards, Michael J. Welch and **James R. Duncan** 1023 Metabolism of receptor targeted ^{111}In–DTPA–glycoproteins: identification of ^{111}In–DTPA–ϵ-lysine as the primary metabolic and excretory product

D. J. Hnatowich, F. Virzi, M. Fogarasi, M. Rusckowski and **P. Winnard Jr** 1035 Can a cysteine challenge assay predict the *in vivo* behavior of ^{99m}Tc-labeled antibodies?

Peter S. Conti, John Hilton, Dean F. Wong, Mian M. Alauddin, Robert F. Dannals, Hayden T. Ravert, Alan A. Wilson and **James H. Anderson** 1045 High performance liquid chromatography of carbon-11 labeled thymidine and its major catabolites for clinical PET studies

Tor Kihlberg, Sven Valind and **Bengt Långström** 1053 Synthesis of fatty acids specifically labelled with ^{11}C in various positions, including ^{2}H substitution, for *in vivo* studies of myocardium using PET

Tor Kihlberg, Sven Valind and **Bengt Långström** 1067 Synthesis of [1-^{11}C], [2-^{11}C], [1-^{11}C]($^{2}H_3$) and [2-^{11}C](H_3)acetate for *in vivo* studies of myocardium using PET

Wolfgang Brandau, Sabine Fischer, Cornelia Puskás, Axel Steinsträßer, Ludwig Kuhlmann and **Otmar Schober** 1073 New renal function imaging agents. I. Synthesis and biological characterization of a [^{99m}Tc]diaminomercapto(thio)ether (DAMTE)

Makiko Suehiro, Ursula A. Scheffel, Hayden T. Ravert, George A. Ricaurte, George Hatzidimitriou, Robert F. Dannals, Klaus P. Bøgesø and **Henry N. Wagner Jr** 1083 Highly potent indanamine serotonin uptake blockers as radiotracers for imaging serotonin uptake sites

Fabrice Perin, Didier Hoffschir, Jean-Christophe Pittet, François Daburon, Gérard Normier, Hans Binz and **Alain Le Pape** 1093 Evaluation of possible interference of anti-inflammatory drugs upon scintigraphic imaging with macrophage targeting ^{99m}Tc–J001X: effects of methylprednisolone, dexamethasone, indomethacin and methotrexate

L. M. Guerdoud, R. Ouellet and **J. E. Van Lier** 1101 Evaluation of ^{99m}Tc-labeled modified serum albumin for tumor detection

Alfred F. McFee, Scott D. Robertson, and **Lee C. Washburn** 1109 Cytogenetic damage in marrow cells of mice after injections of yttrium-90-labeled monoclonal antibody

Prahlad R. Singh, Kavita K. Katti, Kattesh V. Katti, Mel Corlija, Alan R. Ketring, Wynn A. Volkert and **Richard R. Holmes** 1115 A new ^{99m}Tc-complex with a germanium–hydrazide (GeTH) ligand

Book Review
David M. Taylor 1119